



## SEQUENCE LISTING

<110> KADOWAKI, TAKASHI  
YAMAUCHI, TOSHIMASA  
KAMON, JUNJI  
WAKI, HIRONORI  
NAGAI, RYOZO  
KIMURA, SATOSHI  
TOMITA, MOTO

<120> INSULIN RESISTANCE IMPROVING AGENT

<130> 256653US0PCT

<140> 10/502,051  
<141> 2004-07-30

<150> PCT/JP02/07599  
<151> 2002-07-26

<150> JP 2002-23554  
<151> 2002-01-31

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<170> PatentIn version 3.3

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<212> DNA  
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gac cag gaa acc acg actcaa ggg ccc gga gtc ctg ctt ccc ctg ccc  
Asp Gln Glu Thr Thr Gln Gly Pro Gly Val Leu Leu Pro Leu Pro  
20 25 30

aag ggg gcc tgc aca ggt tgg atg gcg ggc atc cca ggg cat ccg ggc  
Lys Gly Ala Cys Thr Gly Trp Met Ala Gly Ile Pro Gly His Pro Gly  
35 40 45

cat aat ggg gcc cca ggc cgt gat ggc aga gat ggc acc cct ggt gag

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Lys Gly Ala Cys Thr Gly Trp Met Ala Gly Ile Pro Gly His Pro Gly  
35 40 45

His Asn Gly Ala Pro Gly Arg Asp Gly Arg Asp Gly Thr Pro Gly Glu  
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Lys Gly Glu Lys Gly Asp Pro Gly Leu Ile Gly Pro Lys Gly Asp Ile  
65 70 75 80

Gly Glu Thr Gly Val Pro Gly Ala Glu Gly Pro Arg Gly Phe Pro Gly  
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Ile Gln Gly Arg Lys Gly Glu Pro Gly Glu Gly Ala Tyr Val Tyr Arg  
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Ser Ala Phe Ser Val Gly Leu Glu Thr Tyr Val Thr Ile Pro Asn Met  
115 120 125

Pro Ile Arg Phe Thr Lys Ile Phe Tyr Asn Gln Gln Asn His Tyr Asp  
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Gly Ser Thr Gly Lys Phe His Cys Asn Ile Pro Gly Leu Tyr Tyr Phe  
145 150 155 160

Ala Tyr His Ile Thr Val Tyr Met Lys Asp Val Lys Val Ser Leu Phe  
165 170 175

Lys Lys Asp Lys Ala Met Leu Phe Thr Tyr Asp Gln Tyr Gln Glu Asn  
180 185 190

Asn Val Asp Gln Ala Ser Gly Ser Val Leu Leu His Leu Glu Val Gly  
195 200 205

Asp Gln Val Trp Leu Gln Val Tyr Gly Glu Gly Glu Arg Asn Gly Leu  
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Gln Ala Leu Leu Phe Leu Leu Ile Leu Pro Ser His Ala Glu Asp Asp  
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gtt act aca act gaa gag cta gct cct gct ttg gtc cct cca ccc aag 153  
Val Thr Thr Glu Glu Leu Ala Pro Ala Leu Val Pro Pro Pro Lys  
25 30 35

gga act tgt gca ggt tgg atg gca ggc atc cca gga cat cct ggc cac 201  
Gly Thr Cys Ala Gly Trp Met Ala Gly Ile Pro Gly His Pro Gly His  
40 45 50

aat ggc aca cca ggc cgt gat ggc aga gat ggc act cct gga gag aag 249  
Asn Gly Thr Pro Gly Arg Asp Gly Arg Asp Gly Thr Pro Gly Glu Lys  
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gat acc aac tga ctgcaactac ccatagccca tacaccagga gaatcatggaa Asp Thr Asn 245	829
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20 25 30

Pro Pro Pro Lys Gly Thr Cys Ala Gly Trp Met Ala Gly Ile Pro Gly  
35 40 45

His Pro Gly His Asn Gly Thr Pro Gly Arg Asp Gly Arg Asp Gly Thr  
50 55 60

Pro Gly Glu Lys Gly Glu Lys Gly Asp Ala Gly Leu Leu Gly Pro Lys  
65 70 75 80

Gly Glu Thr Gly Asp Val Gly Met Thr Gly Ala Glu Gly Pro Arg Gly  
85 90 95

Phe Pro Gly Thr Pro Gly Arg Lys Gly Glu Pro Gly Glu Ala Ala Tyr  
100 105 110

Met Tyr Arg Ser Ala Phe Ser Val Gly Leu Glu Thr Arg Val Thr Val

115

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125

Pro Asn Val Pro Ile Arg Phe Thr Lys Ile Phe Tyr Asn Gln Gln Asn  
130 135 140

His Tyr Asp Gly Ser Thr Gly Lys Phe Tyr Cys Asn Ile Pro Gly Leu  
145 150 155 160

Tyr Tyr Phe Ser Tyr His Ile Thr Val Tyr Met Lys Asp Val Lys Val  
165 170 175

Ser Leu Phe Lys Lys Asp Lys Ala Val Leu Phe Thr Tyr Asp Gln Tyr  
180 185 190

Gln Glu Lys Asn Val Asp Gln Ala Ser Gly Ser Val Leu Leu His Leu  
195 200 205

Glu Val Gly Asp Gln Val Trp Leu Gln Val Tyr Gly Asp Gly Asp His  
210 215 220

Asn Gly Leu Tyr Ala Asp Asn Val Asn Asp Ser Thr Phe Thr Gly Phe  
225 230 235 240

Leu Leu Tyr His Asp Thr Asn  
245